GRIGORYAN, M.S.; BRUTYAN, A.S.

Dynamics of total protein and protein fractions during radiation
sickness in swine. Izv.AN Arm.SSR.Biol.nauki 12 no.4:39-48
Ap '59.   (MIRA 12:9)

1. Kafedra patologicheskoy fiziologii i patologicheskoy anatomii
Yerevanskogo zooveterinarnogo instituta.
          (RADIATION SICKNESS)   (BLOOD PROTEINS)

BRUTYAN, Kh.K.

Automatic increase of computational accuracy in a machine with a
fixed point. Trudy Vych. tsentra no.1:46-58 '63. (MIRA 16:11)

BRUTYAN L

BRUTYAN, L.

Eduard Kazarian's miniatures. Tekh. mol. 26 no.1:4 '58. (MIRA 11:1)
(Miniature objects)

BRUTYAN, L.

Professor of mathematics. Rabotnitsa 36 no. 6:25 Je '58.

(MIRA 11:8)

(Oleinik, Ol'ga Arsen'evna)

BRUT'YO, J

BRUT'O, Yanosh [Brutyo, Janos]

Record to be proud of. Vsem.prof.dvizh. no.4:25-28 Ap '60.
                                                (MIRA 13:4)

1. General'nyy sekretar' TSentral'nogo soveta profsoyuzov Vengrii.
   (Hungary--Economic conditions) (Hungary--Trade unions)

BRUTYO, Janos

On the way of newer achievements. Munka 10 no.1:1-2 Ja '60.

1. Szakszervezetek Orszagos Tanacsa fotitkara, es "Munka" foszer-kesztoje.

BRUTYO, Janos

Workers' sense of responsibility has increased concerning the management of enterprises and plants. Munka 10 no.3:1-4 Mr '60.

1. Szakszervezetek Orszagos Tanacsa fotitkara, es "Munka" foszerkesztoje.

BRUTYO, Janos

We firmly support the struggle of the World Federation of Trade
Unions for the vital interest of workers. Hjng TU no.1:2-3 Ja '62.

1. General Secretary of the Central Council of Hungarian Trade Unions

BRUTYO, Janos

"We assure all striking Spanish workers of our fraternal solidarity." Hung TU no.5:25 My '62.

1. General Secretary on behalf of the President of the Trade Union Council.

BRUTYO, Janos

Guide to our work, program for the progress of our people are
the Central Committee's congressional guiding principles. Munka
12 no.10:1-5 0 '62.

1. Szakszervezetek Orszagos Tanacsa fotitkara, es "Munka" foszer-
kesztoje.

BRUTYO, Janos

Trade unions concentrate all their strength on the complete construction
of socialism. Munka 12 no.12:1-5 D '62.

1. Szakszervezetek Orszagos Tanacsa fotitkara, es "Munka" foszerkesztoje.

BRUTYO, Janos

The Hungarian trade unions prepare for their 20th Congress.
Hung TU no.3/4:2-9 '63.

1. First Secretary, Central Council of Hungarian Trade Unions.

BRUTYO, Janos

An interview with Janos Brutyo, secretary general, Central
Council of Hungarian Trade Unions, at the end of the year.
Munka 14 no. 1:1-3   Ja '64.

1. Szakszervezetek Orszagos Tanacsa fotitkara; "Munka" foszer-
kesztoje.

SOMOGYI, Miklos; RUTYO, Janos

Hungarian trade unions for the strengthening and unity of the trade-union world movement. Munka 14 no. 7:1-4 Jl '64.

1. President, Central Council of Hungarian Trade Unions (for Somogyi). 2. Secretary General, Central Council of Hungarian Trade Unions; Editor-in-Chief, "Munka" (for Rutyo).

BRUTYO, Janos

> A talk with Mr.Janos Brutyo, General Secretary of the Central
> Council of Hungarian Trade Unions on the international activity
> of the Hungarian trade unions. Hung TU no.3:1-2 Mr '65.
>
> 1. Secretary General, Central Council of Hungarian Trade Unions,
> Budapest.

BRUTYO, Janos; TENYI, Ferenc, technologus; MARTIN, Janos; KIS SZABO, Laszlone; ARADI, Tibor; HOFFMANN, Nandor; KIRALY, Albert; BOROSS, Istvan, mernok

National conference of socialist brigade leaders.   Munka 15 no.4: 10-17   Ap '65.

1. Secretary General of the Central Council of Hungarian Trade Unions, Budapest (for Brutyo). 2. Lang Machine Factory, Budapest (for Tenyi). 3. Tatabanya Coal Mining Trust, Tatabanya (for Aradi). 4. Kobanya Drug Factory, Budapest (for Hoffmann).
5. Research Institute of Heavy Chemical Industry (for Kiraly).
6. Csepel Automobile Factory, Budapest (for Boross).

BRUVER, Ye.A.; MISHCHENKO, V.V.; SMIRNOV, Yu.T.

Efficient groups of boreholes in electric rotary drilling in exploratory workings. Uch. zap. SAIGIMSa no.7:233-239 '62.   (MIRA 17:2)

1. Sredneaziatskiy nauchno-issledovatel'skiy institut geologii i mineral'nogo syr'ya, Tashkent.

BRUVERIS, Z.

Changes in the length of segments of the spinal cord and vertebral
column of the cow and pig during the early embryonal period. Vestis
Latv ak no.8:83-90 '61.

COUNTRY   :   USSR
CATEGORY   :   Cultivated Plants. Forage Crops

ABS. JOUR.   :   RZhBiol., No. 23 1958, No. 104732

AUTHOR   :   Bruy, A. M., Zamkovoy, G. M., Golokovskaya, I. N.
INST.   :   Dnepropetrovsk Agricultural Institute
TITLE   :   On the feasibility of Securing Two Mowings of Corn.

ORIG. PUB.   :   Zhivotnovoustvo, 1957, No. 6, 73-77

ABSTRACT   :   In the experiments at Dnepropetrovskiy Agricultural
                  Institute, corn planted on the 29th of April (variety
                  Uspekh) reached a height of 80-110 centimeters by the 5-6th
                  of July. Formation of flowers was in progress in the
                  primordial panicle in the majority of the plants and elong-
                  ation and differentiation of the terminal axillary buds was
                  beginning. The moving of the green bulk was done on the
                  8th of July at a height of 8-15cm. As the result of the
                  variation in the height of mowing, the stalk in some plants
                  was cut off (in 45.4% of the plants), in others - the

Card: 1/3

71

COUNTRY   :
CATEGORY   :   M

ABS. JOUR.   : RZhBiol., No.   1958, No. 104732

AUTHOR   :
INST.   :
TITLE   :

ORIG. PUB.   :

ABSTRACT   : panicle (42.1%) and in still others – only the leaves
                 (8.5%). Plants with the stalk untouched during the mowing
                 and with the panicle cut, grew by means of   the con-
                 tinuation of the growth of the main stem and of the leaves
                 remaining after the mowing. Plants in which the cut was
                 above the primordial panicle, grew rapidly but developed
                 slowly. In the plants with the panicle cut low, the con-
                 tinuance slowed down, the plants had an inhibited appear-
                 ance; later, the growth proceeded normally. The cutting
                 of the leaves with a partial removal or no removal of the

CARD: 2/4

COUNTRY   :
CATEGORY   :   M

ABS. JOUR.   : RZhBiol., No.   195 8,No. 104732

AUTHOR   :
INST.   :
TITLE   :

ORIG. PUB.   :

ABSTRACT   : developing panicle was later reflected in the overall
                diminution in the size of the plants. The earlier the
                mowing was done, the larger were the dimensions attained
                by the growing plants. Delay in the development and the
                lag in growth are explained by the removal of a consid-
                erable part of the assimilating surface. Plants with the
                stem cut, i.e. those in which the primordial panicle and
                part of the stem with axillary buds were removed, grew for

CARD: 3/4
                                    72

COUNTRY   :   M
CATEGORY   :

ABS. JOUR.   :   RZhBiol., No.   19jb, No. 104732

AUTHOR   :
INST.   :
TITLE   :

ORIG. PUB.   :

ABSTRACT   :   the most part at the expense of the buds at the aboveground
                 noues; the suckers aevelopea were of smaller dimensions.
                 To obtain two mowings of corn, the first mowing has to be
                 done at a height exceeding the developing panicle. In
                 1956, the yield of green roughage of corn from two mowings,
                 on the whole, did not surpass the single mowing for silage.
                 -- M. A. Novoaerzhkin

Card: 4/4

BRUYAK, Ye.A., inzhener.

Errors committed by the State Institute for the Planning of Peat
Industry Plants in land allotment plans. Torf.prom.33 no.3:18:19
'56.   (MIRA 9:7)

1. Belgostorf.
          (Public lands) (Peat industry)

DROZD, Ya.I.; BRUYAK, Ya.A.; IZAKOV, Sh.I., tekhn. red.

[Examples of calculations of reinforced concrete elements] Pri-
mery rascheta zhelezobetonnykh konstruktsii. Minsk, Redaktsionno-
izd.otdel BPI im.I.V.Stalina, 1960. 165 p.   (MIRA :4:12)
                        (Precast concrete)

TURUTA, N.U., kand. tekhn. nauk; ZUB, N.I., inzh.; BRUYAKIN, A.V., inzh.

Productivity and optimum depth of drilling holes with drilling
rigs equipped with sinker air hammers in open-pit mine workings.
Izv. vys. ucheb. zav.; gor. zhur. 6 no.6:88-92 '63. (MIRA 16:8)

1. Ukrainskiy nauchno-issledovatel'skiy i proyektnyy institut
(for Turuta). 2. Spetsializirovannoye upravleniye No.77
Transvzryvproma (for Zub, Bruyakin).
(Boring machinery)

BRUYAKIN, A.V., inzh.; ZUB, N.I., inzh.

Testing electric detonators of short delayed action. Transp. stroi. 13 no.10:67-68 O '63.   (MIRA 17:8)

TURUTA, N.U., kand. tekhn. nauk; BRUYAKIN, A.V., kand. tekhn. nauk

Breaking of fractured rocks by blasting with various of
explosive charges. Vzryv. delo no.57/14:82-90 '65.
(MIRA 18:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy
institut ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti
UkrSSR.

SYZGANOV, A. N.; BRYAKIN, Yu. M.

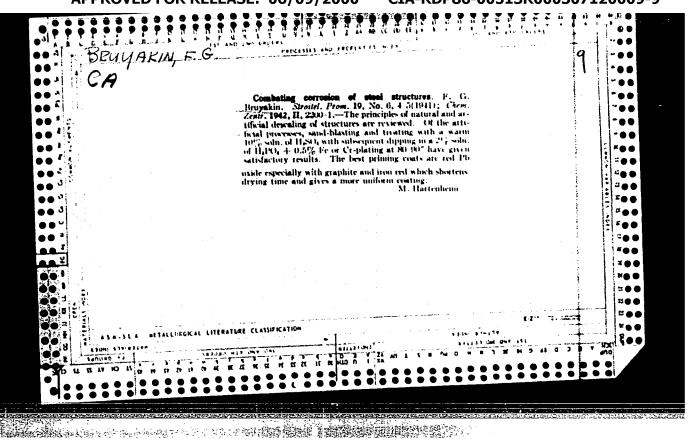Surgical treatment of mitral stenosis. Zdrav. Kazakh. no.4:
7-13 '62.   (MIRA 15:6)

1. Iz Instituta klinicheskoy i eksperimental'noy khirurgii
(direktor - akademik AN Kazakhskoy SSR A. N. Syzganov)
Akademii nauk Kazakhskoy SSR.

(MITRAL VALVE--SURGERY)

ZUB, N.I., inzh.; BRUYAKIN, A.V.

Short-delay blasting of deep holes in open pit mines. Gor.
zhur. no. 11:53-55 N '60.   (MIRA 13:10)

1. Ukrzheldorvzryvprom, Kiyev.
   (Strip mining)   (Blasting)

BRUYAKIN, F.G.

CA

Combating corrosion of steel structures. F. G. Bruyakin. *Stroitel. Prom.* 19, No. 6, 4–5(1941); *Chem. Zentr.* 1942, II, 2300-1.—The principles of natural and artificial descaling of structures are reviewed. Of the artificial processes, sand-blasting and treating with a warm 10% soln. of H_2SO_4 with subsequent dipping in a 2% soln. of H_3PO_4 + 0.5% Fe or Cr-plating at 80–100° have given satisfactory results. The best priming coats are red Pb oxide especially with graphite and iron red which shortens drying time and gives a more uniform coating.

M. Hartenheim

METALLURGICAL LITERATURE CLASSIFICATION

L 08269-67

ACC NR: AT6036480

external respiration of the cosmonauts. Physical exercises and ortho-static tests were included to detect earlier signs of physiological shifts.

Examinations were carried out before and after training in the ship, where certain conditions of flight were simulated, and also two weeks before flight. Postflight examination was begun fifteen minutes after landing and was continued for the first four days after the flight and also two weeks later.

After landing, the cosmonauts were active, looked somewhat excited, and complained of general fatigue. They were found to have hyperemia of the mucosa of the upper respiratory tract and conjunctivitis.

Komarov's weight dropped by 2.6%, Feoktistov's weight dropped by 4%, and Yegorov's by 3.9%. Weight loss was determined by Zhdanov to be due to water and fat loss. Neurological examination revealed a light swaying in the Romberg position, a tremor of the fingers, and increased perspiration. In addition, Yegorov showed a contraction of the retinal arteries. Disruption of vision and vestibular difficulties were not noted. Changes in EEG indicated an increase in inhibitory processes in the cortex of the brain. A diminution in work capacity was established by

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!. CS269-67

ACC NR: AT6036480

psychological experiments (increase in the number of mistakes, increase in latent periods).

Indices of cardiovascular activity during rest did not exceed wide norms. However, an increase in pulse frequency was noted (Komarov up to 96, Feoktistov up to 100, and Yegorov up to 94 beats/min), as well as moderate drop in arterial pulse pressure at the expense of an increase in diastolic pressure. All three cosmonauts, when subjected to exercise, showed a significant increase in the pulse rate and inertia in the stroke volume. Feoktistov and Yegorov showed a significant diminution in the heart stroke volume and minute circulation of the blood during the passive orthostatic test. This could indicate a discuption of the venous inflow to the heart.

Postflight blood examinations indicated neutrophilic leukocytosis and eosinopenia. Urine was found to contain significant quantities of salts, chiefly urates, single erythrocytes (in the field of vision), and an increase in the excretion of 17-oxycorticosteroids. Eosinopenia, an increase in excretion of products of hormone decomposition, indicated the development of a stress reaction in cosmonauts. Since some of the indications found on the flight were also found after training in the train-

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ACC NR: AT6036480

O

ing ship, there is reason to attribute them to limitation of motor activity under conditions of weightlessness. The functional shifts found after flight are indications of a general fatigue, a moderate stress reaction, and a certain amount of detraining. In general, the changes observed in the cosmonauts were of one type. The differences found between the cosmonauts can be attributed to individual differences. [W.A. No. 22; ATD Report 66-116]

.SUB CODE: 06, 22 / SUBM DATE: 00May66

Card 4/4

L 04296-67 EWP(m)/EWP(k)/EWT(d)/EWT(1)/EWT(m)/EWP(w)/EWP(v)   IJP(c)   EM/WW

57
B

AUTHOR: Bruyatskiy, Ye. V. (Kiev)

ORG: Institute of Hydromechanics, AN UkrSSR (Institut gidromekhaniki AN UkrSSR)

TITLE: On the application of the Vekua method to the solution of Oseen equations

/

ABSTRACT: The plane stabilized motion of a viscous incompressible fluid at low Rey-
nolds numbers is investigated. Generalized Navier-Stokes equations are linearized in
C. W. Oseen's classic approximation, Neuere Methoden und Ergebnisse in der Hydrodyna-
mik, Leipzig, 1927. For the solution of these equations, the method evolved by N. I.
Vekua (Novyye metody resheniya ellipticheskikh uravneniy, Gostekhizdat, Moscow, 1948)
was used. The essence of the method is that the transition to a complex plane brings
about a solution of the fundamental equation of the flow function which is no longer
elliptic, but hyperbolic. This solution of Oseen's random problem alloys to estab-
lish the distribution of speeds and to calculate the drag acting upon an infinite cy-
linder at Re < 12. Analytical expressions for the flow function, the velocity of com-
ponents, and the frontal drag are developed. A theoretical curve showing the rela-

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L 04296-67

ACC NR: AP6026745

tionship between the drag coefficient of a circular cylinder and the Re is evolved; the curve is in close agreement with experimental data obtained by other authors for Re < 12. Orig. art. has: 25 formulas, 1 figure.

SUB CODE: 20/   SUBM DATE: 17Nov65/   ORIG REF: 004/   OTH REF: 003

Card 2/2

L 07446-67   EWP(m)/EWT(1)   WW

ACC NR: AP6035498   UR/0198/66/002/010/0121/0127

AUTHOR: Bruyatskiy, Ye. V. (Kiev)

ORG: none

TITLE: Approximate method for solving the boundary-value Oseen problem for a cylinder of an arbitrary form

SOURCE: Prikladnaya mekhanika, v. 2, no. 10, 1966, 121–127

TOPIC TAGS: hydrodynamics, boundary value problem, Oseen problem, approximate solution

ABSTRACT: An approximate method for solving the problem of a plane steady flow of a viscous incompressible fluid past a cylindrical body of arbitrary form is presented, utilizing the linearized (in the sense of Oseen) Navier-Stokes equations as input equations. As was shown in a previous article by the author, [Prikladnaya mekhanika, v. 2, no. 5, 1966], the solution of the problem for small Reynolds numbers is reduced to the solution of the boundary-value problem for the equation

$$\Delta \left(\Delta - 2\lambda \frac{\partial}{\partial x} \right) \Psi_1 = 0, \tag{1}$$

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where $2\lambda = \frac{V_\infty}{\nu}$, V_∞ is the velocity of a homogeneous undisturbed flow, ν is the kinematic viscosity, and Ψ_1 is a stream function of disturbed motion. To solve this boundary value problem, the well known method of the boundary form distortion is applied. The functions entering the boundary conditions (conditions for the complex conjugate velocity) are expressed in the form of expansions in powers of a small parameter ε and the solution of (1) in a polar coordinate system is sought in the form

$$\Psi(r, \theta, \varepsilon) = \sum_{j=0}^{\infty} \varepsilon^j \Psi(r, \theta). \tag{2}$$

By substituting (2) into (1), an infinite system of equations for the j-th approximation ($j = 0, 1, 2...$) of the problem is derived. It is pointed out that the zero approximation is to be understood as the solution of the defined problem when $\varepsilon = 0$, that is, for a circular cylinder. By applying the theory of conformal mapping, it is shown that solution of the defined problem for a cylinder with an arbitrary diretrix is reduced to the solution of a sequence of boundary-value problems for a circular cylinder which is solved by author in the above-mentioned article. As an illustration of the method, uniform flows past elliptic, square, and triangular cylinders with rounded corners whose axis are perpendicular to the direction of the disturbed flow are analyzed. Analytic expressions for drag coefficients are

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ACC NR: AP6035498 O:

obtained in terms of Reynolds numbers (Re), and the ratio of semiaxis $(\frac{a}{b})$ and their
numerical values for various Re, $\frac{a}{b}$, and ϵ are calculated. Orig. art. has: 1 figure
and 19 formulas.

SUB CODE: 01/ SUBM DATE: 21Apr66/ ORIG REF: 007/ ATD PRESS: 5104

Card 3/3

GRIGOR'YEV. V.A., kand. tekhn. nauk; CHERNYSHEV, I.N., kand. tekhn. nauk; BRUYEV, E.V.

Control of thermal conditions in rubber tires. Avt. prom. 31
no.2:17-19 F '65.

(MIRA 18:3)

1. Moskovskiy energeticheskiy institut i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

BRUYEV Pavel Kirillovich; KAZAKOV, N., red.

[300 centners of green bulk and 10.3 centners of lupine
seed per hectare] Liupin - 300 tsentnerov zelenoi massy,
10,3 tsentnera semian. Smolensk, Smolenskoe knizhnoe izd-
vo,[n.d.] 28 p.
(MIRA 17:7)

1. Predsedatel' kolkhoza "Rossiya" Shumyachskogo pr zvod-
stvennogo kolkhozno-sovkhoznogo upravleniya (for Bruyev).

BRUYEV, S.

Let's have a sound plan for the production of suburban state
farms. Sov. torg. 35 no.5:17-19 My '62.   (MIRA 15:5)
            (State farms) (Moscow—Vegetable trade)

BRUYEV, S., kand.tekhn.nauk

Time limits for the plum trade could be extended. Sov. torg.
36 no.10:36-37   O '62.
(Fruit trade)
(Plum)

(MIRA 16:2)

BRUYEV, S. N.

Effect of the method of handling on the quality and keeping quality of apples. Sad i og., No 8, 1952.

BRUYEV, Sergey Nikolayevich; STRONGIN, V.L., red.; BABICHEVA, V.V.,
    tekhn.red.

[Storing fresh apples at temperatures below freezing]
Khranenie svezhikh iablok pri temperaturakh nizhe nulia.
Moskva, Gos.izd-vo torg.lit-ry, 1958. 63 p.   (MIRA 13:1)
               (Apple--Storage)

BRUYEV, S.N.; YEROKHINA, M.V.

Role of the temperature and pure cultures of lactic acid bacteria in the production and preservation of sauerkraut and pickles. Kons. i ov.prom. 19 no.1:22-24 Ja .'64.   (MIRA 17:2)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.

BRUYEV, Sergey Nikolayevich; BORISCVA, G.A., red.

[Preserving and storing of plums] Konservirovanie i khranenie sliv. Moskva, Ekonomika, 1965. 98 p. (MIRA 18:5)

S/062/60/000/012/003/020
B013/B055

AUTHORS: Rubinshteyn, A. M., El'tekov, Yu. A., Bruyeva, T. R.

TITLE: Studies on Adsorption by Aluminum Oxide Monohydrate and
                γ-Aluminum Oxide

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
                1960, No. 12, pp.2107-2117

TEXT: The present paper is a complex study on the adsorptive properties
of aluminum oxide monohydrate (boehmite) and its dehydration products with
respect to Ar, N_2, $n\text{-}C_6H_{14}$, C_6H_6, and CH_3OH. The adsorption of argon and
nitrogen was studied at $-195°C$ and that of n-hexane and benzene at $20°C$
using the same samples (1 to 5). Aluminum hydroxide was used as initial
compound. It was precipitated from a 10% solution of $Al(NO_3)_3$ with a 10%
NH_4OH solution and then treated according to Ref. 1. The experiments were
performed in a soldered vacuum apparatus (Fig. 1), consisting of 3 main
parts: 1) the vacuum device, 2) a device containing a vacuum microburette
and 3) the gas-cleaning system. This apparatus made possible, firstly, the

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Studies on Adsorption by Aluminum Oxide
Monohydrate and γ-Aluminum Oxide

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investigation of gas adsorption by the volumetric method and vapor adsorption by means of the vacuum microburette using one and the same catalyst and, secondly, the simultaneous measurement of two samples. The experimental adsorption isotherms of nitrogen vapors are shown in Fig. 2a and those of argon in Fig. 2b. The specific surfaces of the samples investigated were calculated by the simpler B-point method and the standard Brunauer-Emmett-Teller method (Fig. 3, Table 1). The results are in satisfactory agreement. The measurements carried out in this study, together with data published in Ref. 1 show that sorbed argon (ω_o = 15.4 A^2) and nitrogen (ω_o = 16.2 A^2) occupy corresponding surface areas. The experimental and calculated data obtained in adsorption studies of n-hexane and benzene are shown in Figs. 4-7 and Tables 2 and 3. From these it can be seen that the calculated specific surfaces of the samples investigated are somewhat fortuitous and characterized by abnormally high values of S. This anomaly is due to the increased sorptive energy of the developed texture of the system Al_2O_3-H_2O and its dependence on the H_2O content. The effect of dehydration of Al_2O_3 on the adsorption was studied and the absolute adsorption isotherms of n-C_6H_{14} and C_6H_6 (Fig. 8), nitrogen (Fig. 9), and argon (Fig. 10) were

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Studies on Adsorption by Aluminum Oxide   S/062/60/000/012/003/020
Monohydrate and γ-Aluminum Oxide   B013/B055

calculated. The degree of dehydration inside a water content of 11.6 to
4.0% by weight had no influence on the adsorption of $n\text{-}C_6H_{14}$, whereas it
noticeably increased the adsorption of C_6H_6, nitrogen, and even that of
argon, in the initial monomolecular range. The increased adsorption of
nitrogen in the initial range, as compared to argon, may be explained by
an additional interaction energy of the nitrogen quadrupole with the elec-
tric field of $\gamma\text{-}Al_2O_3$. The quadrupole moment of argon is zero. The adsorbabi-
lity of the investigated vapors on aluminum hydroxide (boehmite) is low be-
cause it has a looser lattice than $\gamma\text{-}Al_2O_3$. The crystal lattice of boehmite
contains more excited hydroxyl groups owing to their close mutual neighborhood
than $\gamma\text{-}Al_2O_3$ which is built up of closely packed and entirely or partly
ionized oxygen- and aluminum atoms. There are 10 figures, 3 tables, and
20 references: 8 Soviet, 5 US, and 3 German.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii
nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy
of the Academy of Sciences USSR)

SUBMITTED: July 10, 1959

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S/195/60/001/003/011/013
B013/B058

AUTHORS: Rubinshteyn, A. M., Slovetskaya, K. I., Bruyeva, T. R.

TITLE: Study of the Adsorption Properties of Aluminum-chromium-
               potassium Catalysts for the Dehydrogenation of Paraffins

PERIODICAL: Kinetika i kataliz, 1960, Vol. 1, No. 3, pp. 455 - 463

TEXT: In this paper the authors studied the adsorption properties of an
active aluminum-chromium-potassium catalyst (13% Cr_2O_3, 84.6% Al_2O_3, and
2.4% K_2O) with regard to water vapor, isopropyl alcohol and isopentane.
Two samples of equal composition, but from different production batches
were used. They were of somewhat different texture, but of almost equal
activity. Sample 1 was used for studying the adsorption of isopentane,
sample 2 for that of water and isopropanol. The isopentane adsorption
on sample 1 was studied by the capillary method described in Ref. 22.
The adsorption isotherms measured at $20°$, $50°$, $100°$, $150°$, $205°$, $241°$,
$297°$, and $325°C$ were well reproducible. It was established that only a

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Study of the Adsorption Properties of
Aluminum-chromium-potassium Catalysts
for the Dehydrogenation of Paraffins

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physical, completely reversible isopentane adsorption takes place below
150°C, the amount of chemosorbed isopentane increasing exponentially with
the temperature. At 350°C and permanent contact with the catalyst,
cracking of the isopentane occurs at 10 to 15 mm Hg. This is accompanied
by consecutive reactions. The rate of chemosorption which has an acti-
vation energy of ~15 kcal/mole increases quickly with increasing temper-
ature. The following was studied next: a) adsorption of H_2O on a reduced

sample at room temperature; b) removal of H_2O by heating a reduced and

initial sample 2; c) adsorption of H_2O on the initial and the reduced

sample 2 at 400°C. It was ascertained that at room temperature about
50% of the catalyst surface are covered with adsorbed water which can
only be removed by heating up to 300 to 450°C. The adsorption is reversi-

ble at 440°C and is about 0.13 mmol/g catalyst or 0.8 $\mu mol/m^2$ on the
reduced sample. The adsorption of isopropyl alcohol was studied gravi-

Card 2/4

Study of the Adsorption Properties of   S/195/60/001/003/011/013
Aluminum-chromium-potassium Catalysts   B013/B058
for the Dehydrogenation of Paraffins

metrically at 30°C on sample 2 (reduced and initial) on a catalyst of
equal composition produced by means of coprecipitation and on one with-
out K_2O. The primary adsorption on a reduced catalyst differs from that
on an oxidized one by its reproducibility. The adsorption isotherms are
very similar to each other in the case of coprecipitated catalysts with
and without K_2O. It was established that the chemosorption of isopropyl
alcohol on aluminum-chromium- and aluminum-chromium-potassium catalysts
occurs to a great extent and at a high rate already at 30°C and small
relative pressures. Alcohols, among them also methanol, are therefore
unsuitable for determining the specific surface of aluminum-chromium
catalysts. The authors thank O. D. Sterligov and A. P. Belen'kaya for
supplying catalyst samples and for tests. A. L. Klyachko-Gurvich partici-
pated in determining the texture of catalysts. The analyses of decom-
position products were made by Yu. A. Fedyunin with the mass spectro-
meter of the type MИ-1035 (MI-1035). There are 10 figures, 2 tables,

Card 3/4

Study of the Adsorption Properties of
Aluminum-chromium-potassium Catalysts
for the Dehydrogenation of Paraffins

S/195/60/001/003/011/013
B013/B058

and 24 references: 8 Soviet, 9 US, 1 German, 5 British, and 1 French.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR
                 (Institute of Organic Chemistry imeni N. D. Zelinskiy
                 AS USSR)

SUBMITTED: May 13, 1960

Card 4/4

S/020/60/134/004/034/036XX
B016/B067

AUTHORS: Rubinshteyn, A. M., Slovetskaya, K. I., and Bruyeva, T. R.

TITLE: Chemosorption of Isopentane on an Aluminum - Chromium -
             Potassium - Catalyst

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 4,
             pp. 836-839

TEXT: The authors describe the chemosorption of isopentane on an
aluminum - chromium catalyst, the standard catalyst for paraffin dehydro-
genation, which they measured for the first time. They studied the chemo-
sorption of the paraffins and olefins at dehydrogenation temperatures
which are close to those of the paraffins. The adsorption of isopentane
was studied by the capillary method (Ref. 15). The chemosorption of
isopentane rapidly increases with an increase in temperature. Consequently
it is assumed to be rather high at the dehydrogenation temperature of the
paraffins (500°C and above). The authors conclude from the rapid increase
in the number of chemosorption centers (estimated from the rapidly
increasing amount of the isopentane chemosorbed with rising temperature,

Card 1/2

Chemosorption of Isopentane on an Aluminum -   S/020/60/134/004/034/036XX
Chromium - Potassium - Catalyst   B016/B067

that at 500-550°C a considerable part of the catalyst surface is bound to
take part in chemosorption. The calculation based on a diagram extrapolated
for 550°C shows that at 550°C about 18.8% of the surface (calculated on
the basis of a monolayer at 20°C) take part in the chemosorption of
isopentane. Assuming that the activated and adsorbed isopentane is
subject to the reaction the authors conclude that about 0.2 of the total
catalyst surface take part in the dehydrogenation at 550°C. At present,
the chemosorption of isopentene on the same catalyst, is being studied.
A. L. Klyachko-Gurvich took part in the examination of the catalyst.
Yu. A. Fedyunin who made some analyses, and G. D. Lyubarskiy are also
mentioned. There are 3 figures, and 16 references: 10 Soviet, 1 US, and
4 British.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii
               nauk SSSR (Institute of Organic Chemistry imeni N. D.
               Zelinskiy of the Academy of Sciences USSR)

PRESENTED: May 13, 1960, by B. A. Kazanskiy, Academician

SUBMITTED: May 12, 1960

Card 2/2

EL'TEKHOV, Yu.A.; BRUYEVA, T.R.; RUBINSHTEYN, A.M.

Texture and adsorption properties of chromium oxide and hydroxide.
Izv.AN SSSR Otd.khim.nauk no.4:560-565 Ap '61.   (MIRA 14:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
        (Chromium oxide)   (Chromium hydroxide)

RUBINSHTEYN, A.M.; SLOVETSKAYA, K.I.; BRUYEVA, T.R.

Adsorption of 2-methyl-3-butene on a dehydrogenation catalyst.
Kin.i kat. 2 no.4:584-589 Jl-Ag '61.   (MIRA 14:10)

1. Institut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR.
            (Butene)   (Dehydrogenation)

RUBINSHTEYN, A.M.; SLOVETSKAYA, K.I.; BRUYEVA, T.R.

Chemosorption of isopropyl alcohol on mixed γ Al_2O_3-based catalysts.
Dokl. AN SSSR 139 no. 3:626-629 Jl '61.   (MIRA 14:7)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.
Predstavleno akademikom B.A. Kazanskim.
                    (Isopropyl alcohol) (Aluminium oxide)

S/195/63/004/001/008/009
E075/E436

AUTHORS: Rubinshteyn, A.M., Slovetskaya, K.I., Bruyeva, T.R.

TITLE: The influence of the activation and regeneration
              processes of alumina-chromia catalysts on their
              structure and the degree of surface hydration

PERIODICAL: Kinetika i kataliz, v.4, no.1, 1963, 139-142

TEXT: The authors investigated the catalysts obtained by
simultaneous precipitation of $Cr(OH)_3$ and $Al(OH)_3$ with NH_4OH
from nitrate solutions, before and after use in catalytic
reactions. $Cr_2O_3 - Al_2O_3$ dehydrogenation and dehydrocyclization
catalysts were also investigated.   The aim of the work was to
obtain information on the state and quantity of H_2O held by
catalysts prepared and treated by various methods.   The surface
area and pore dimensions of the catalysts did not change on
successive oxidation - reduction processes.   To determine H_2O
held by the catalysts, they were tested to 500 - 1100°C and the
water absorbed by $MgClO_4$.   Since the removal of H_2O was difficult,
it was concluded that it existed in the form of OH groups attached
to the surfaces.   Reduction of the oxidized catalyst samples for
Card 1/2

The influence of the activation ...   S/195/63/004/001/008/009
                                          E075/E436

3 hours at 450°C increased the number of OH groups on the
surfaces, the hydration of the catalysts containing 23% Cr_2O_3
being stronger than that of the catalysts with 13% Cr_2O_3.
The catalysts oxidized with O_2 contained the smallest quantity of
OH groups.   Reduction with hydrocarbon vapors introduced less
H_2O on to the surfaces than the reduction with H_2,   There are
3 tables.

ASSOCIATION: Institut organicheskoy khimii im. N.D.Zelinskogo
             AN SSSR (Institute of Organic Chemistry imeni
             N.D.Zelinskiy AS USSR)

SUBMITTED: November 14, 1961

Card 2/2

RUBINSHTEYN, A.M.; SLOVETSKAYA, K.I.; KLYACHKO-GURVICH, A.L.; BRUYEVA, T.R.

Adsorption of cyclohexane on a chromia-alumina-potassium catalyst.
Dokl. AN SSSR 151 no.2:343-346 Jl '63.   (MIRA 16:7)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
Predstavleno akademikom B.A.Kazanskim.
                    (Cyclohexane) (Adsorption) (Catalysts)

RUBINSHTEYN, A.M.; SLOVETSKAYA, K.I.; BRUYEVA, T.R.

Adsorption of benzene within a temperature range of 20 to 450°C on chromia-alumina-potassium catalysts. Dokl. AN SSSR 151 no.3: 580-583 Jl '63.   (MIRA 16:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR. Predstavleno akademikom B.A.Kazanskim.
                              (Benzene) (Adsorption) (Catalysts)

RUBINSHTEYN, A.M.; SLOVETSKAYA, K.I.; BRUYEVA, T.R.

Benzene and n-hexane adsorption on aluminum oxide. Izv. AN SSSR.
Ser. khim. no.5:900-902 '65.   (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

SLOVETSKAYA, K.I.; BRUYEVA, T.R.; RUBINSHTEYN, A.M.

Adsorption of methanol on aluminum-chromium-potassium catalysts.
Izv. AN SSSR. Ser. khim. no.5:903-904 '65.   (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

BRUYEVICH, A.N.; YEVTYANOV, S.I.; ALEKSANDROVA, A.A., red.

[Approximation of nonlinear characteristics and the
spectra under harmonic action] Aproksimatsiia nelinei-
nykh kharakteristik i spektry pri garmonicheskom voz-
deistvii. Moskva, Sovetskoe radio, 1965. 343 p.
                                        (MIRA 18:8)

21532

S/109/60/005/010/029/031/XX
E033/E415

9.3260 $(2104, 1067, 1144)$

AUTHOR: Bruyevich, A.N.

TITLE: Asynchronous Oscillations in Oscillators With Two
             Degrees of Freedom

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.10,
             pp.1559-1567

TEXT: The behaviour of oscillators having two degrees of freedom
has been previously investigated by using either a polynomial or an
exponential approximation for the anode current.   The grid bias,
however, has either not been considered, or it has been treated as
for peak detection.   Such analysis is incomplete since, with
certain ratios of the frequency-determining impedance to the
automatic bias impedance, the behaviour of the oscillator differs
from its behaviour with peak detection.   In this work, the
author does not assume peak detection, but the anode and grid
current characteristics are idealized to straight line segments
(polygon approximation).   The author starts from the equation
obtained by S.I.Yevtyanov (Ref.6)

$$T_i \frac{dU_i}{dt} + U_i = R_i I_{2-i,i-1}, \quad i = 1,2, \tag{1}$$

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S/109/60/005/010/029/031/XX

Asynchronous Oscillations ...   E033/E415

where T_i is the time constant of the i-th circuit;
R_i is the controlling impedance of the i-th circuit and
$I_{2-i,i-1}$ is the harmonic of the anode current at the frequency of
the i-th circuit.   The equation for the "inertialess" automatic
bias circuit is

$$E_c = - I_{c00}R_c \qquad\qquad (2)$$

where R_c is the automatic bias impedance and I_{c00} the constant
component of the grid current.   The modulation characteristic
method, which is used for obtaining the harmonics (Ref.7), is
reviewed and applied to investigation of the steady-state
conditions.   It is assumed that in the steady-state, the
amplitudes do not vary and the harmonics of the current are
expressed by the mean slopes, giving

$$S_1(y, x) = \frac{1}{R_1 S},$$

$$S_2(y, x) = \frac{1}{R_2 S},$$

$$I_0(y_c, x) = \frac{y_c}{R_0 S_0}.$$

Eq.
(9)

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Asynchronous Oscillations ...

where S is the slope of the linear part of the valve
characteristic and x is the dimensionless voltage amplitude

$$x = \frac{U_2}{U_1}$$

and y is the dimensionless geometric bias (i.e. the bias E_c
relative to the cut-off bias E_c'

$$y = - \frac{E_c - E_c'}{U_1}$$

$R_i S$ is called the regeneration of the i-th circuit; $R_c S_c$ is
called the bias factor. To solve the system of Equations (9),
Fig.1, which shows the dependence of the mean slope and the
constant component of the grid current on the bias, is used to
construct the relationship $U_1(U_2)$ on the amplitude-plane. The
method of construction is described for the two cases $U_1 > U_2$ and
$U_1 < U_2$ and the results are discussed. Curves showing the
oscillation amplitudes versus the first circuit regeneration are

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S/109/60/005/010/029/031/XX
E033/E415

Asynchronous Oscillations ...

next constructed. The method of construction is demonstrated in
Fig.2a which shows the shift of a particular stable point on the
amplitude-plane for $R_2S = 3$ and $R_1S = 2.5 - 4$. Fig.3a shows
curves for $R_cS_c = 10$ and Fig.3b for peak detection.
Fig.3a shows three types of curves:
1. $R_2S = 2.5$. $R_1S < 2.2$:- oscillations occur only in the
second circuit. $2.2 < R_1S < 3.3$:- oscillations of both
frequencies occur. $3.3 < R_1S$:- oscillations occur only in
the first circuit. When $R_1S = 3.3$, the oscillations in the
second circuit decay smoothly and oscillations in the first
circuit increase smoothly.
2. $R_2S = 3$. As for 1 above, but the fall of amplitude in the
second circuit is not smooth. $3.25 < R_1S < 4.4$:- simultaneous
growth of oscillations occurs in both circuits. $R_1S > 4.4$:-
U_2 again falls and when $R_1S = 5.1$ oscillation in the second
circuit is suppressed.
3. $R_2S = 3.5$. The part showing simultaneous growth of both
amplitudes is large and suppression of oscillations in the second
circuit occurs only with very large R_1S (not shown). For
R_2S 3.6 oscillation in the second circuit is not suppressed and
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S/109/60/005/010/029/031/XX
E033/E415

Asynchronous Oscillations ...

both U_1 and U_2 increase with R_1S. (This will not occur in practice due to grid-anode voltage reversal.)
The manner in which the R_1S and R_2S plane is sectioned off according to the nature of the oscillations is next investigated. The following regions are indicated: 1. no oscillations; 2. oscillations in either the first or the second circuit, depending on the initial conditions; ·3. oscillations in the first circuit; 4. oscillatio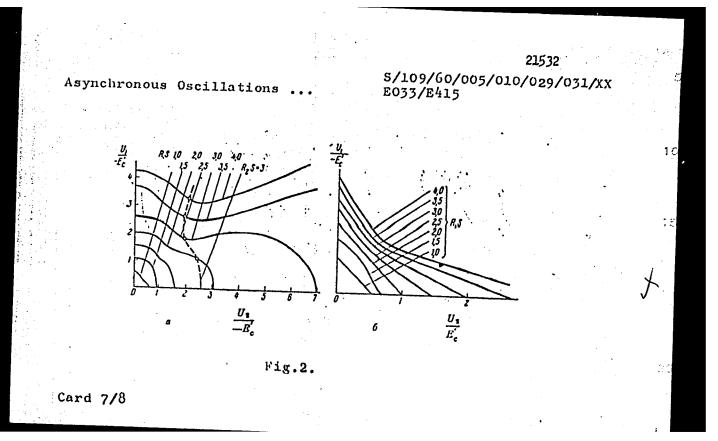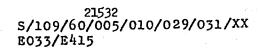ns in the second circuit; 5. oscillations at two frequencies. Acknowledgments are expressed to S.I.Yevtyanov for his assistance. There are 5 figures and 9 references: 7 Soviet and 2 non-Soviet.

SUBMITTED: January 28, 1960

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Asynchronous Oscillations ...

Fig.
1.

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Asynchronous Oscillations ...

21532

Fig.2.

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Asynchronous Oscillations ...

Fig.3.

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40936
S/109/62/007/007/004/018
D271/D308

AUTHOR: Bruyevich, A. N.

TITLE: Spectra in frequency multipliers

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 7, 1962,
             1082-1090

TEXT: Multi-stage frequency multipliers are studied assuming that
parasitic harmonics at the output are much smaller than the requir-
ed harmonic. The problem of spectrum distortion by a stage is con-
sidered and a method for calculating harmonics in all stages is
explained. The Duhamel integral is used for the analysis of a mul-
tiplier stage, and transient phenomena are eliminated. Imperfec-
tions of a stage cause amplitude and phase modulation of the exci-
tation of the following stage. Stage current consists of pulse
groups; free oscillations excited by pulses are superimposed on os-
cillations resulting from preceding pulse trains and voltage sto-
rage takes place. An equation is formulated for the sum of all
stored voltages, in terms of stage current and load parameters.

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Spectra in frequency ...

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D271/D308

The voltage at any instant is seen as composed of the accumulation
of previous excitations and of the effect of current excitation.
The second component is constant in the intervals between pulses.
The case is considered when the stage load is a single tuned cir-
cuit. It is shown that the output voltage is both amplitude and
phase modulated, although phase modulation disappears when the
load circuit is accurately tuned. A non-overlapping operation of
the multiplier is assumed, i.e. the tube in a stage is cut off be-
fore the tube of the stage which follows is made conductive; this
is true for single tuned circuit loads. A complex Fourier series
representation is used in the study of the current spectrum in a
stage. It is shown that parasitic current harmonics appear because
of the increased depth of amplitude modulation and increased index
of phase modulation. In relation to the desired output frequency
of a stage, parasitic harmonics bear fractional numbers. The ef-
fect of the phase and amplitude modulation at the output of the
first stage is calculated using a complex modulation index, and
amplitudes of current harmonics in the second stage are evaluated.
Amplitudes of consecutive harmonics alternately decrease and in-

Card 2/3

Spectra in frequency ...

8/109/62/007/007/004/018
D271/D308

crease, with a quasi-periodic envelope. Recurrent formulas are derived for the change of the phase and amplitude modulation effect between the input and output of a stage. The procedure is described for calculating all spectrum components in all stages. S. I. Yevtyanov's supervision is acknowledged. There is 1 figure.

SUBMITTED: October 31, 1961 (initially.)
            January 31, 1962 (after revision)

Card 3/3

BRUYEVICH, A.N.

Asynchronous oscillations of a self-oscillator with two degrees of freedom under overload conditions. Radiotekh.i elektron. 6 no.6: 895-906 Je '61.   (MIRA 14:6)

(Oscillators, Electric)

BRUYEVICH, A.N.

Operation of the stages of a multiplier with large cutoff angles. Elektro-
sviaz' 17 no.12:33-42 D '63.   (MIRA 17:2)

ACCESSION NR: AP4038603   S/0108/64/019/005/0054/0059

AUTHOR: Bruyevich, A. N. (Active member)

TITLE: Nonisochronism of master oscillators of harmonic oscillations

SOURCE: Radiotekhnika, v. 19, no. 5, 1964, 54-59

TOPIC TAGS: oscillator, electron tube oscillator, master oscillator, transients in oscillator, oscillator frequency

ABSTRACT: Due to higher harmonics, the phase of the mean transconductance of a master-oscillator tube is usually described by an infinite series; only the first few terms are used in practice. To avoid truncation errors, a closed form of summation is developed which permits a simplified calculation with any desirable degree of approximation. The formulas cover 4 typical master-oscillator circuits: (1) the Meissner circuit, (2) the Hartley circuit, (3) the Colpitts circuit, and (4) the dynatron circuit. The formulas are based on Yevtyanov's

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ACCESSION NR: AP4038603

equation describing the process of establishing the frequency in a self-excited oscillator (Radiotekhnika i elektronika, no. 1, 1959). The new method facilitates calculating the frequency correction under transient or steady-state conditions in an oscillator. The method is also applicable to the case of an infinite series of harmonics which may describe the effect of the grid current or a self-bias circuit on the frequency. The frequency drift increases with regeneration; the least drift is inherent to the Meissner circuit. "The author is deeply grateful to S. I. Yevtyanov for his attention to the work and going over the manuscript." Orig. art. has: 6 figures, 26 formulas, and 1 table.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 07Sep62   DATE ACQ: 09Jun64   ENCL: 00

SUB CODE: EC.   NO REF SOV: 004   OTHER: 001

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BRUYEVICH, A.N.

Optimum cutoff angles of a multistage frequency multiplier. Elektrosviaz'
18 no.7:54-59 Jl '64.   (MIRA 17:10)

L 11613-66   EWT(1)/EWA(h)

ACC NR: AP5028788   SOURCE CODE: UR/0108/65/020/009/0001/0008

AUTHOR: Bruyevich, A. N. (Active member)

ORG: Scientific and Technical Society of Radio Engineering and Electro-
communication (Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi)

TITLE: Spurious FM in frequency multipliers

SOURCE: Radiotekhnika, v. 20, no. 9, 1965, 1-8

TOPIC TAGS: frequency multiplier, phase modulation, frequency multiplication,
FM, electronic circuit

ABSTRACT: Heretofore, theoretical investigations have dealt only with square
current pulses and imperfect filtration in h-f circuits. This article submits a theory
of spurious FM with an arbitrary characteristic resulting from imperfect filtration in
d-c supply circuits, such as a bias-voltage circuit. Instability of frequency-
multiplier operation due to the latter cause is far greater than the instability due to
h-f harmonics. Also, variation of tube input capacitance is taken into account in the
present article. Types of phase shift dependent on the mode of operation of the
multiplier are determined. Quantitative relations between the multiplier-output

Card 1/2   UDC: 621.374.4

L 11613-66

ACC NR: AP5028788

pulsations and those of supply sources, stray pickups, etc., are developed for a single-stage multiplier. These relations, however, are rather theoretical as the spurious FM occurs mainly in multistage frequency multipliers. "In conclusion, the author wishes to thank S. I. Yevtyanov for his constant attention to the work." Orig. art. has: 31 formulas.

SUB CODE: 09 / SUBM DATE: 10Feb64 / ORIG REF: 006 / OTH REF: 001

Card 2/2

BRUYEVICH, N.G.

CHERKUDINOV, Sergey Aleksandrovich; ARTOBOLEVSKIY, I.I., akademik,
        otv.red.; BLAGONRAVOV, A.A., akademik, otv.red.; BRUYEVICH,
        N.G., akademik, red.; DIKUSHIN, V.I., akademik, red.; SERENSEN,
        S.V., akademik, red.; PINEGIN, S.V., prof., doktor tekhn.nauk,
        red.; LEVITSKIY, N.I., prof., doktor tekhn.nauk, red.; DI-
        MENTBERG, F.M., doktor tekhn.nauk, red.; KOBRINSKIY, A.Ye.,
        doktor tekhn.nauk, red.; RAYEVSKIY, N.P., kand.tekhn.nauk,
        red.; BESSONOV, A.P., kand.tekhn.nauk, red.; KUDASHEV, A.I.,
        red.izd-va; ASTAF'YEVA, G.A., tekhn.red.

[Synthesis of flat hinged-lever mechanisms; problems on the
reproduction of a continuous function on a given section]
Sintez ploskikh sharnirno-rychazhnykh mekhanizmov; zadachi
o vosproizvedenii nepreryvnoi funktsii na zadannom otrezke.
Moskva, Izd-vo Akad.nauk SSSR, 1959. 321 p.   (MIRA 13:1)

1. AN USSR (for Serensen).
            (Machinery, Kinematics of)

UBSR/Academy of Sciences   Apr/May/Jun 48

"The Conditions of the Prize imeni S. S. Smirnov,"
S. I. Vavilov and I. G. Bruyevich, 1 p

"Zapiski V-S Mineral Obshch" Vol LXXVII, No 2

Prize, awarded every 3 years for best work in field
of geology of ore deposits, is worth 10,000 rubles.
Applications and theses must be submitted in next
3-year period, beginning in 1949.

1/49T1

BRUYEVICH, I.S.

Country   : USSR   J
Category   : Soil Science. Mineral Fertilizers.

Abs. Jour. :   53431

Author   : Bruyevich, I.S.
Institut. : Gomel'sk State Pedagogical Institute
Title   : Peat Ash, an Excellent Supplementary Fertilizer

Orig. Pub. : Uch. zap. Gomel'sk. gos. ped. in-ta, 1956, vyp. 3,
             297-300

Abstract   : No abstract

Card: 1/1

BRUYEVICH, Nikolay Grigor'yevich

"The Kinematics of the Simplest Three-Dimensional Mechanisms with Pairs of the Fifth Class," Trudy Voenno-vozdushnoy akad. RKKA im. Zhukovskogo (Works of the Military Air Academy of the Red Army imeni Zhukovskiy), 1937, Collected Works, No. 18.

"The Kinetostatics of Three-Dimensional Mechanisms" Ibid., 1937, Collected Works, No. 22.

BRUYEVICH, N. G.

BRUEVICH, NIKOLAI GRIGOR'EVICH

O tochnosti mekhanizmov. Moskva, AN SSSR, 1941. 50 p. diagrs.

On the precision of mechanisms.

MH   NIC

DLC: TJ170.B87

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

BRUEVICH, NIKOLAI GRIGOR'EVICH.

Oshibki kulachkovykh mekhanizmov s dvumia stepeniami svobody. Moskva
AN SSSR, 1942. 19 p. fold. pl. (diagrs.)

Errors of cam gears with two neutral positions.

MH   WaU   DLC: TJ206.B7

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library
of Congress, 1953.

BRUEVICH, NIKOLAI GRIGOR'EVICH

Oshibki kulachkovykh mekhanizmov s dvumia stepeniami svobody. Moskva, AN SSSR, 1942. 18, /2_7 p. fold. pl. (diagrs.)

Errors of cam gears with two neutral positions.

DLC: TJ206.B7

MH WaU

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

BRUEVICH, N. G.

Oshibki mekhanizmov dlia chercheniia linii. Moskva AN SSSR, 1942.
62 p. diagrs.

Errors of line-tracing mechanisms.

MH   WaU   DLC: TJ175.B7

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library
of Congress, 1953.

BRUYEVICH, N. G.

"V.L.Komarov During World War II," Vest Ak Nauk SSSR, No 10, 1944

Bruevič, N. G. On the accuracy of the fundamental formula of the theory of the errors of a mechanism. Bull. Acad. Sci. URSS. Cl. Sci. Tech. [Izvestia Akad. Nauk SSSR] 1944, 515–558 (1944). (Russian)

The author nibbles at the problem of the error of the conventional first order error theory of linkage mechanisms. If q_0 are the independent dimensions and position coordinates of an ideal linkage M_0, the position of a link of the real mechanism M can be represented by $\phi_0(q_0 + \Delta q_0)$, and the error $\delta\phi$ of the linear error is given by the tail of the Taylor expansion of the last expression in powers of Δq_0, starting with the second order terms. The author writes

$$\delta\phi = \phi_0{}''\Delta q^2 + \phi_0{}'''\Delta q^3 + \cdots, \ g \text{ being a singled out parameter.}$$

Here $\phi^{(n)} = (d^n\phi/dt^n)/g^n$, t is the time, and the subscript 0 refers to the ideal values of the parameters. The $\phi^{(n)}$ are given an easy kinematic interpretation allowing one to simplify their computation. Obvious upper bounds of $\delta\phi$ are stated, the expressions for mean $\delta\phi$ cited. One example is worked out in detail. The paper is needlessly elaborate.

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[Principles for computing allowances and errors in dimensional and
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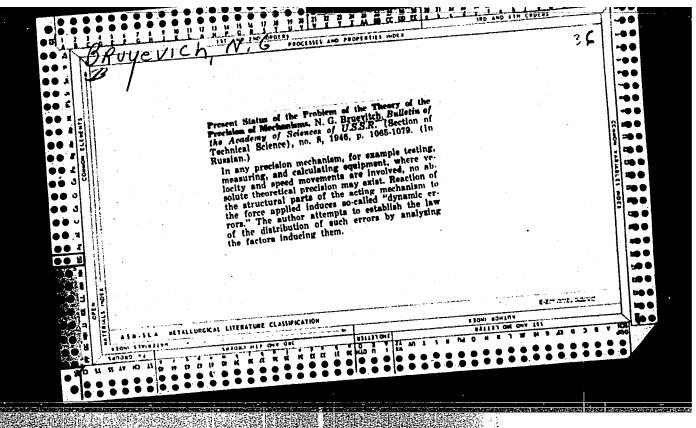BRUEVICH, N. G.

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Precision of mechanisms.

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PROCESSES AND PROPERTIES INDEX

Present Status of the Problem of the Theory of the Precision of Mechanisms. N. G. Bruevitch, Bulletin of the Academy of Sciences of U.S.S.R. (Section of Technical Science), no. 8, 1946, p. 1065-1079. (In Russian.)

In any precision mechanism, for example testing, measuring, and calculating equipment, where velocity and speed movements are involved, no absolute theoretical precision may exist. Reaction of the structural parts of the acting mechanism to the force applied induces so-called "dynamic errors." The author attempts to establish the law of the distribution of such errors by analyzing the factors inducing them.

METALLURGICAL LITERATURE CLASSIFICATION

BRUYEVICH N. G.   PA 10T52

USSR/Academy of Sciences   Aug/Sep 1946
    Geography

"The Five-Year Plan Basic Problems of the Academy
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Five-Year Plan for science is broken up to indicate
individual tasks of the important branches of
science. One of projects of the geographic branch
is publication of a large works, "Geography of the
USSR." Article gives good indication of the types
of research to be carried on.

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